

ANALYST BRIEFING

3QFY2024

29 November 2024 | Business Lounge, TNB Platinum



Key Highlights

Stable performance in 9MFY2024, driven by the successful strategic initiatives, positions us for continued growth

9MFY2024

PAT



Reported

RM3,821.8 mil

PAT (before forex translation)

RM2,775.8 mil

+13.7%

(Y-o-Y) (FY2023: RM2,441.7 mil)

Stable financial performance

Demand Growth



7.6%

(Y-o-Y) Units Sold: 104,175GWh

Growth in economic activities

GDP



5.3%

(Y-o-Y)

Strong expansion in investment activities

OUTLOOK

Demand Growth



5.8% – 6.3%

(Revised for 2024)

GDP



4.8% – 5.3%

(Revised for 2024)

Source: Budget 2025 Speech

TNB's 75-Year Legacy: Adapting to evolving energy landscape and sustainability aspirations



Prime Minister Anwar emphasised TNB's role in balancing sustainable energy with economic growth, stressing environmental responsibility and innovation in tackling climate challenges.

The key takeaways from PM Anwar Ibrahim's speech:

- 1 Renewable Shift**
 - Reduce coal dependency and accelerate renewable energy transition
- 2 ASEAN Power Grid (APG) Initiative**
 - TNB's role in realising the APG, positioning Malaysia as a future regional energy hub
- 3 Green Initiatives**
 - Adoption of the Green Lane Pathway and the Green Building Index reinforces eco-friendly development
- 4 Research and Innovation**
 - TNB to address energy transition challenges through ongoing research and innovative solutions

As a key player in the ASEAN Power Grid, TNB is advancing energy security and leading the region's energy transition

Regional Business Opportunities

- 1 Lao PDR-Thailand-Malaysia-Singapore Power Integration Project (LTMS-PIP)**
 - Signed agreement with Singapore's Keppel Electric Pte. Ltd. to supply up to 100MW of electricity using existing interconnections.
 - Electricity export began in September 2024 under willing seller willing buyer arrangement (delivered ~7.5GWh to date).
- 2 Cross Border Electricity Sales Renewable Energy (CBES RE) Scheme via ENEGEM**
 - TNB will sign agreement for 50MW with winning bidder in December 2024 under CBES RE scheme Pilot Phase 1.



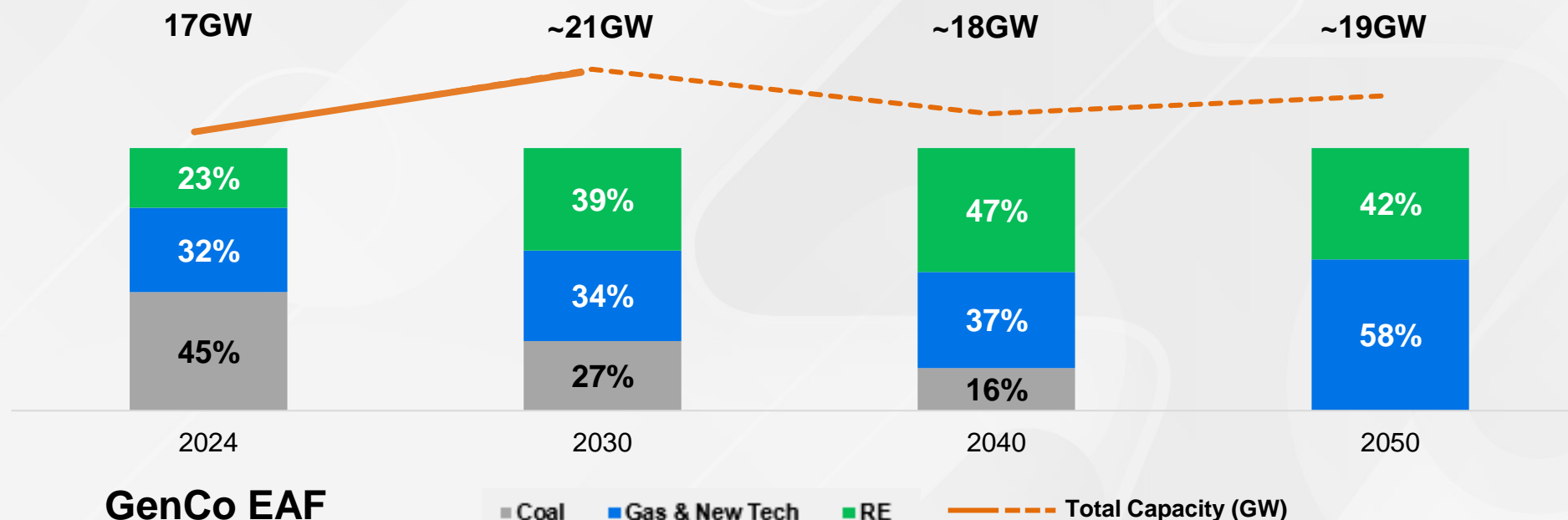
New Revenue Stream
from wheeling and transactions services
FY2025: ~RM60 mil

ASEAN Power Grid (APG)



Strengthen operational performance whilst expanding renewable capacity growth towards Net Zero aspiration

Generation Capacity Mix Projection by 2050



GenCo EAF
9MFY2024

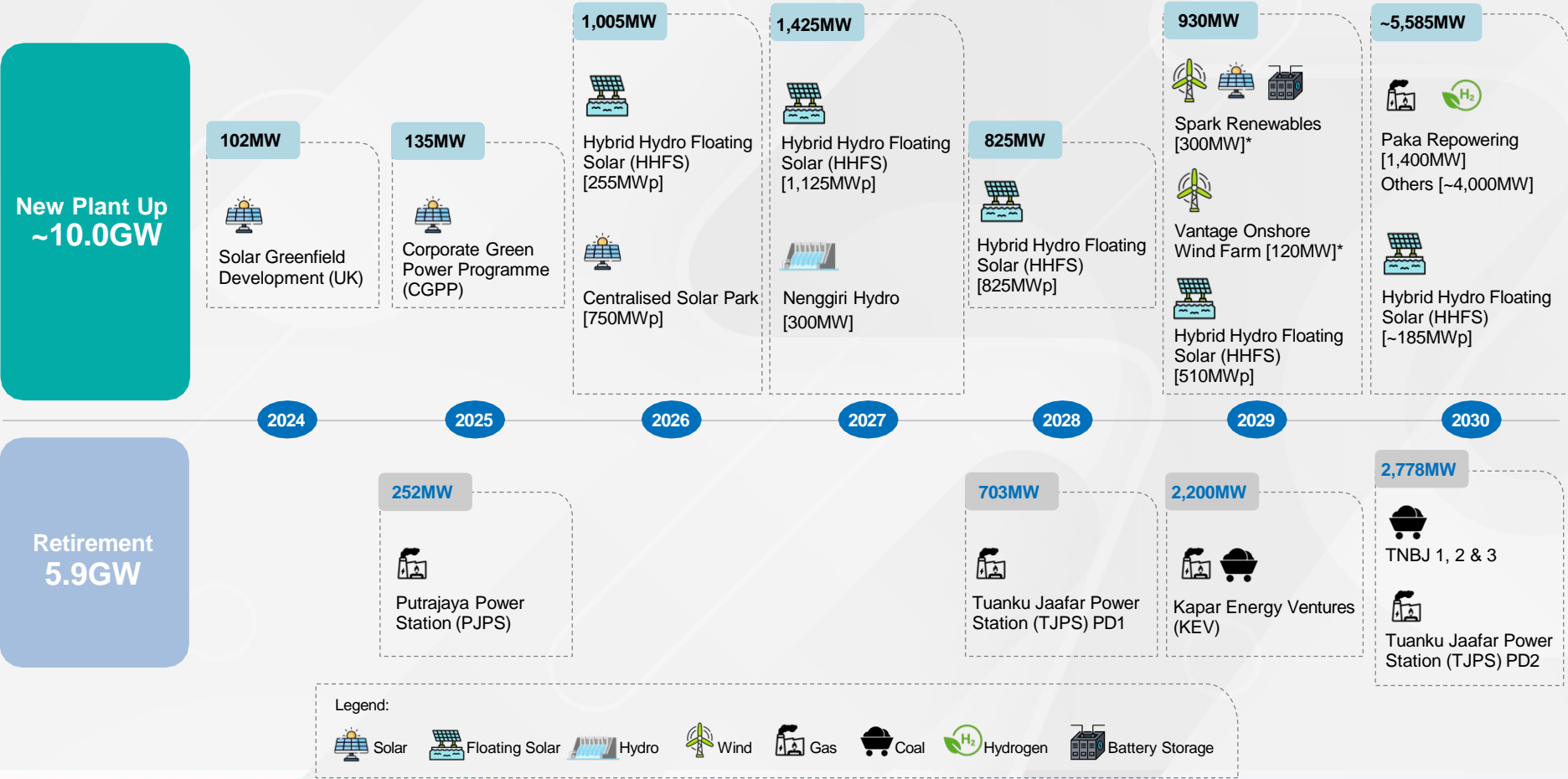
80.0%

2024 Target: 78.6%

Transforming TNB into a greener entity for sustainable future growth

We are making steady progress with a strong pipeline of renewable energy capacity expansion as we transform into a greener entity

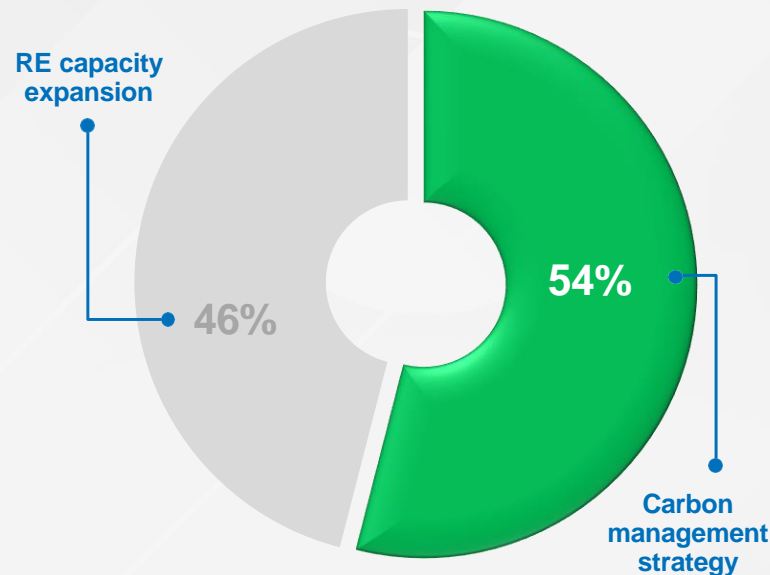
Pipeline projects up to 2030



Note: Solar capacity is quoted in MWp
*Indicative capacity and COD

TNB targets 5% annual reduction in carbon emission intensity (Scope 1) starting 2024, through RE capacity expansion and carbon management strategy

Carbon emission intensity reduction



Three (3) initiatives under carbon management strategy



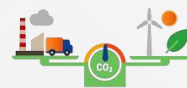
Reduce carbon emission

- Enhancement of power plant efficiency;
- Leveraging Advanced Technology;
- Transitioning Energy Sources; and
- Innovative Co-Firing Solutions.



Capture carbon emission

- Carbon Capture - Development of bio-carbon capture (e.g., microalgae) or chemical carbon capture system to absorb and capture CO₂ efficiently
- Carbon Utilisation - Development of CO₂ utilisation system through biological and hydrogenation pathways



Offset carbon emission

- Invest in nature-based carbon offset initiatives like reforestation to tackle hard-to-abate emissions

QUARTERLY UPDATES

We continue to seek growth opportunities while forging ahead with growing our RE portfolio

Projects

GenCo



Sungai Perak Hydro Life Extension Programme	649MW	COD: 1 st unit 2026 (8MW)
Nenggiri Hydro Project	300MW	COD: 2Q2027
Hybrid Hydro-Floating Solar PV (HHFS) - Updated	~2,900MWp by 2040	1 st COD: 2026 (255MWp) Chenderoh : 105MWp Kenyir : 150MWp
Paka Repowering	1,400MW	COD: 2029
New Combined Cycle Power Plant (Kapar)	2,100MW	COD: 2031
Co-firing of Hydrogen & Ammonia		

NED



Solar Greenfield Development (UK)	102MWp	COD: 4Q2024
Corporate Green Power Programme (CGPP)	135MWp	COD: 2025
Centralised Solar Park (CSP)	5 x 150MWp	COD: 2026

9MFY2024 Key Highlights

Nenggiri Hydro Project

Achieved **36%** project progress



Completed Diversion Tunnel No. 2

Project progress is on track to achieve COD by end of December 2024

Project progress is on track to achieve Financial Close

Finalisation of land lease agreements (2 sites)

We are on track to fully utilise CAPEX by the end of RP3,
with key projects making strong progress

9MFY2024 Key Achievements

2024
CAPEX



Regulated CAPEX

84%

utilisation equivalent to

RM6.0 bil

Energy Transition (ET)
CAPEX


71%

utilisation out of
RM3.2 bil

Key
Projects



Smart Meter Installation progress:




133%

Installed 802,501 units

FY2024 Target:
600,000 units
Cumulative Installed to date:
4,351,990 units

Distribution Automation Penetration progress:




95%

2,671 substation

FY2024 Target:
2,812 units
Cumulative to date:
30,971 substations

Volt-Var Optimisation (VVO) progress:



58%

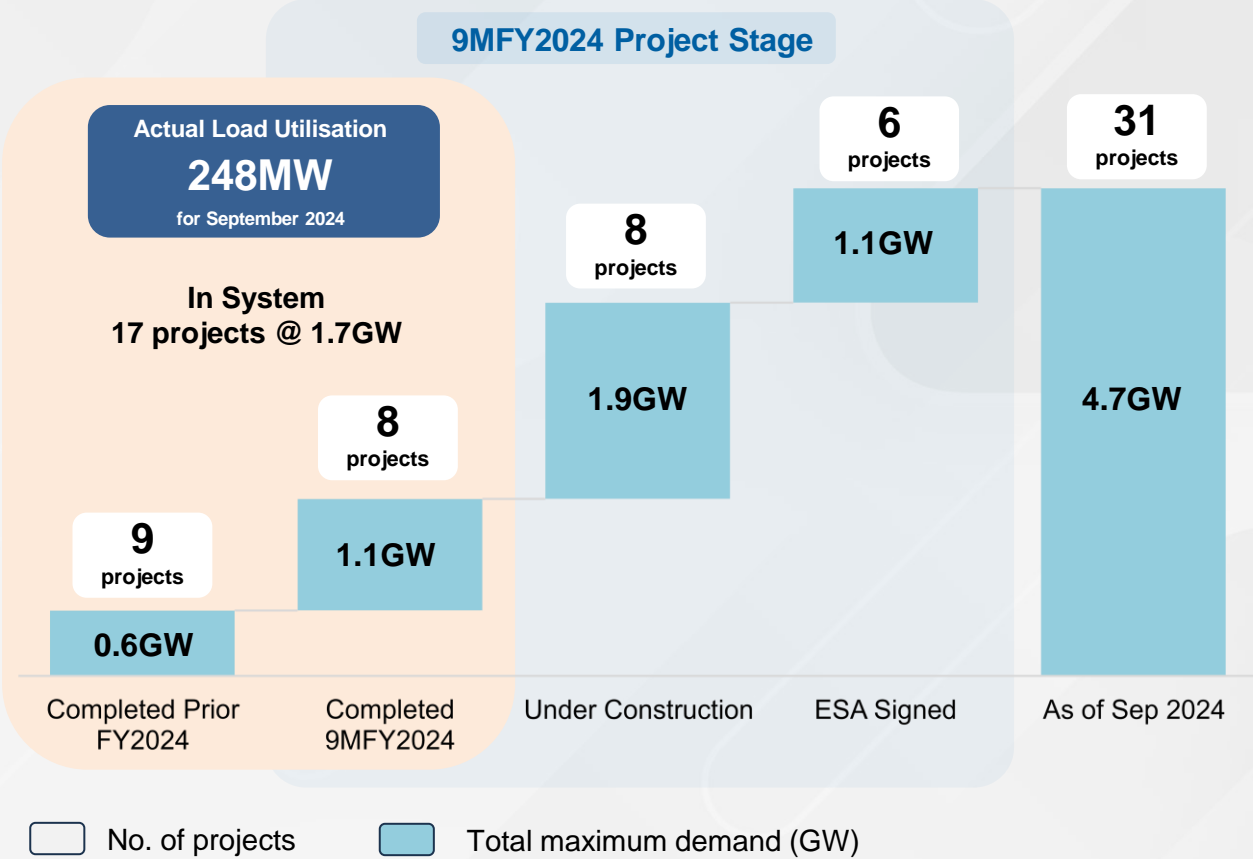
Achieved 80.6MVar

Target 88% by November 2024

FY2024 Target:
140MVar
Cumulative Achieved to date:
832.5MVar

TNB continues to deliver power at scale and speed,
reflecting its strong commitment and support for data centre growth

9MFY2024 Data Centres Achievements



Key Highlights



July 2024: Signing of ESA between TNB and Princeton Digital Group (PDG) during PDG JH1 Grand Launching in Sedenak, Johor- received positive feedback and compliments from Chief Minister of Johor, MITI Minister and PDG on TNB’s commitment in facilitating DC investments in Malaysia.



August 2024: Vantage Data Centre KUL2 Campus Groundbreaking Ceremony showcased TNB’s commitment in providing electricity supply within the stipulated timeline for DC investor.

GSPARX transforms consumers to prosumers through rooftop solar installations, elevating Malaysia's green energy progress

3QFY2024 Key Achievements

16.9MWp


Pejabat Daerah Kuala Nerus

- To install 430kWp rooftop solar PV at their premise in Kuala Nerus, Terengganu.
- Target to be delivered by 2QFY2025.



Majlis Agama Islam Wilayah Persekututan (MAIWP)

- To install 531kWp rooftop solar PV at selected MAIWP-owned buildings across Kuala Lumpur.
- Target to be delivered by 2QFY2025.



Pejabat Setiausaha Kerajaan Negeri Pulau Pinang

- To install 227kWp rooftop solar PV at their premise in Pulau Pinang.
- Target to be delivered by 2QFY2025.



Majlis Amanah Rakyat (MARA)

- To install 13,125kWp rooftop solar PV at MARA-owned building all over Semenanjung Malaysia.
- Target to be delivered by 4QFY2025.

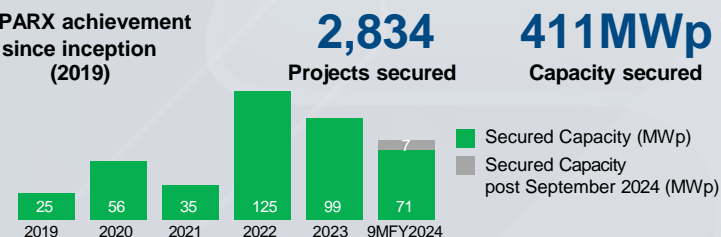


Seri Pajam Development Sdn Bhd

- To install 2,560kWp rooftop solar PV at their new development of semi-detached factories in Senawang, Negeri Sembilan.
- Target to be delivered by 2QFY2026.

Secured Capacity

GSPARX achievement since inception (2019)


2,834
Projects secured

411MWp
Capacity secured

9MFY2024 Status


71MWp
Secured Capacity

160MWp
2024 Target

NEM 3.0 NOVA Extension

87%

Quota Approved Total Quota Allocation (2021- June 2025)

1,100MW¹

Partnership with Sime Darby Property


4.4MW
(14 SDP sites*)

960kWp
10 sites

Progress

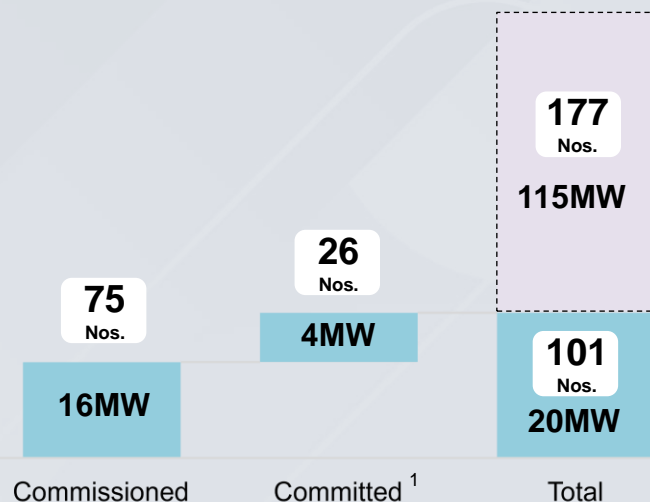
10 sites consist of Sime Darby Sales Galleries, Clubhouses and Malls: At ~50% completion.

*4 sites to be completed in 2025

TNB plays a key role in advancing Malaysia's EV market by installing EV chargers and supplying electricity infrastructure to Charge Point Operators (CPOs)

EV Ecosystem

Green Lane Supply Connections



- Maximum Demand
- No. of Supply Connections (Nos.)
- Potential

Data since inception (November 2022)

YTD Electricity Sales (CPO)



EV Charge Points

3,275 units
Data as at Oct 2024²

EV Cars on the road

~33,000 units
Data as at Sep 2024

2030 EV Potential

500,000 units

Key Highlights

TNB Charge Points



54

Commissioned



66

Cumulative Target by 2024

- In 3QFY2024, 4 Charge Points were energised along the East Coast Major Trunk Roads in partnership with Petron.



- 6 additional Charge Points have been installed and are set to be energised by mid December.

¹ Committed including construction and supply application stage

² PLAN Malaysia - Malaysia Electric Vehicle charge Network

Higher PAT in 9MFY2024 was driven by stable overall performance



REVENUE

▲ 7.5%

RM42,358.8 mil

9MFY2023: RM39,414.9 mil



EBITDA

▲ 0.4%

RM14,398.9 mil

EBITDA MARGIN*: 36.2%

9MFY2023: RM14,342.8 mil

EBITDA MARGIN*: 37.5%



PAT

Reported **RM3,821.8 mil**

▲ 13.7%

RM2,775.8 mil

PAT (before forex translation)

9MFY2023: RM2,441.7 mil

9MFY2024 overall performance was driven by:

- Stable revenue from regulated business and higher revenue contribution from TNBI operations and subsidiaries;
- Stable performance from regulated business;**
- Improved overall GenCo performance** (despite Manjung 4 major outage), attributed to:
 - Lower negative fuel margin of RM92.0 mil (9MFY2023: RM767.9 mil); and
 - Higher availability factor achieved through 'asset turnaround' programme, recording lower capacity payment loss.
- Forex translation gain of RM1,046.0 mil;** and
- Lower finance cost of RM3,019.4 mil due to repayment of loans.

Electricity demand growth of 7.6% (TNB 7.3%) driven by increased economic activities

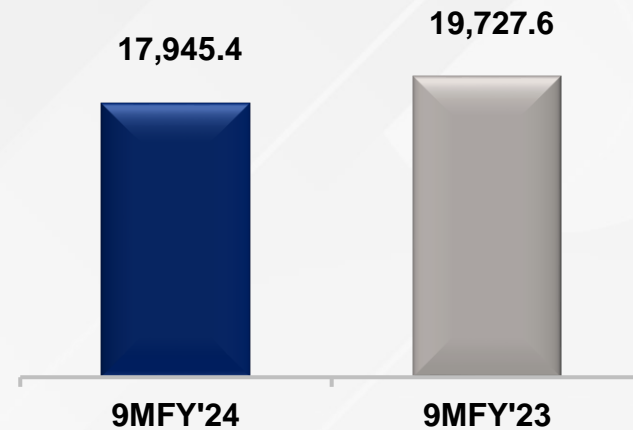
Domestic generation business performance

Y-o-Y: Overall improved performance by power plants despite M4 outage

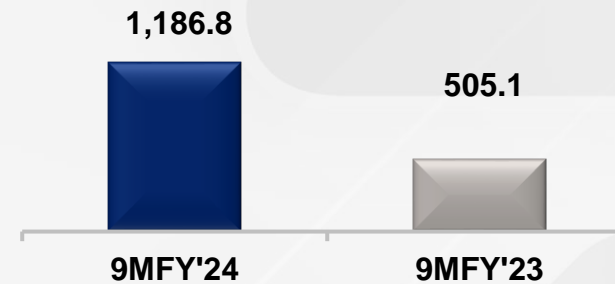
GenCo at Group

RM mil

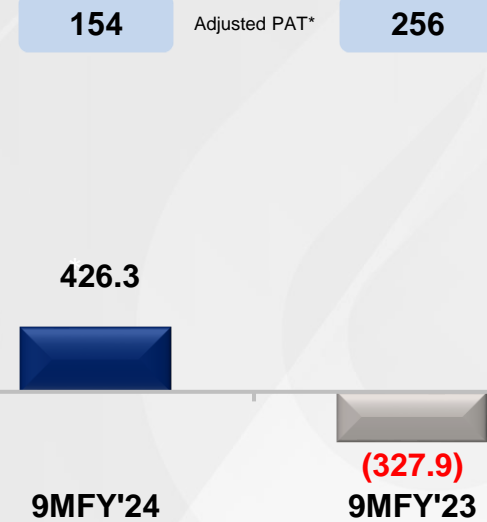
REVENUE



EBIT



PROFIT AFTER TAX (PAT)



*PAT adjusted for:

- Negative fuel margin 9MFY'24: RM92.0 mil and 9MFY'23: RM767.9 mil;
- Availability Target Penalty of RM287.8 mil on Manjung 4 (M4) outage, eliminated at Group (inter-company); and
- SPG one-off claim of RM163.0 mil.

Group earnings supported by; i. Improved generation performance
ii. World-class network performance

Equivalent Plant
Availability Factor, EAF
(Generation)
%



9MFY2024
80.0%
2024 Target: 78.6%



Stable overall performance by
power plants

System Minutes
(Transmission)
Minutes



9MFY2024
0.0001

2024 Internal Threshold: 1.5



World class network
performance safeguarded our
regulated business earnings

SAIDI
(Distribution Network)
Minutes

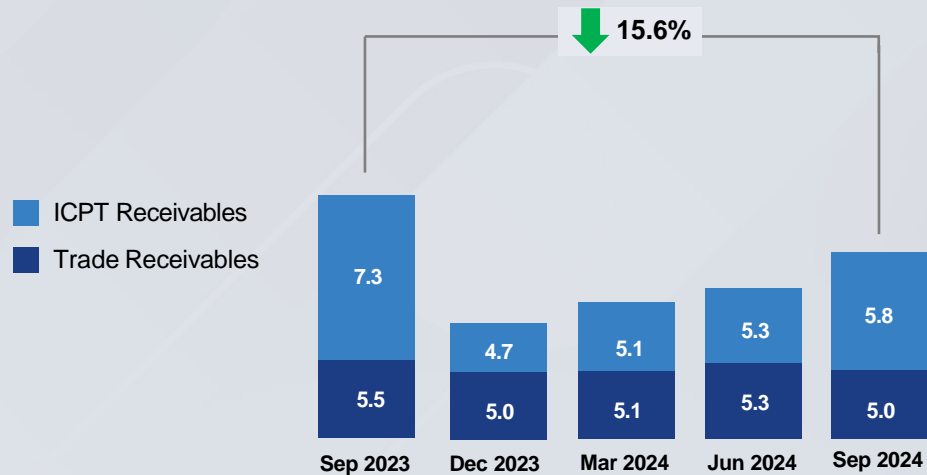


9MFY2024
35.72

2024 Internal Threshold: 48.0

Y-o-Y: Lower receivables driven by lower ICPT and improved collections, strengthening our cash flow position and credit rating

Receivables (RM bil)

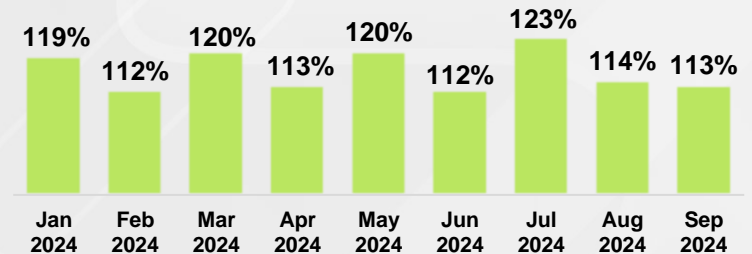


- **Coal price has stabilised** at 121.40 USD/MT* in September 2024 (138.62 USD/MT* in September 2023).
- **Outlook:** Stabilising fuel prices and strong collection trend will:
 - ✓ strengthen working capital management; and
 - ✓ provide a healthier cash flow position.

1

Strong Collection Trend

Strong collection trend with collection rate >100% since March 2022



2

MOODY'S RATINGS

Reaffirmed Tenaga Nasional Berhad's (TNB) corporate credit rating at **A3** with a **stable outlook** (November 2024)

3

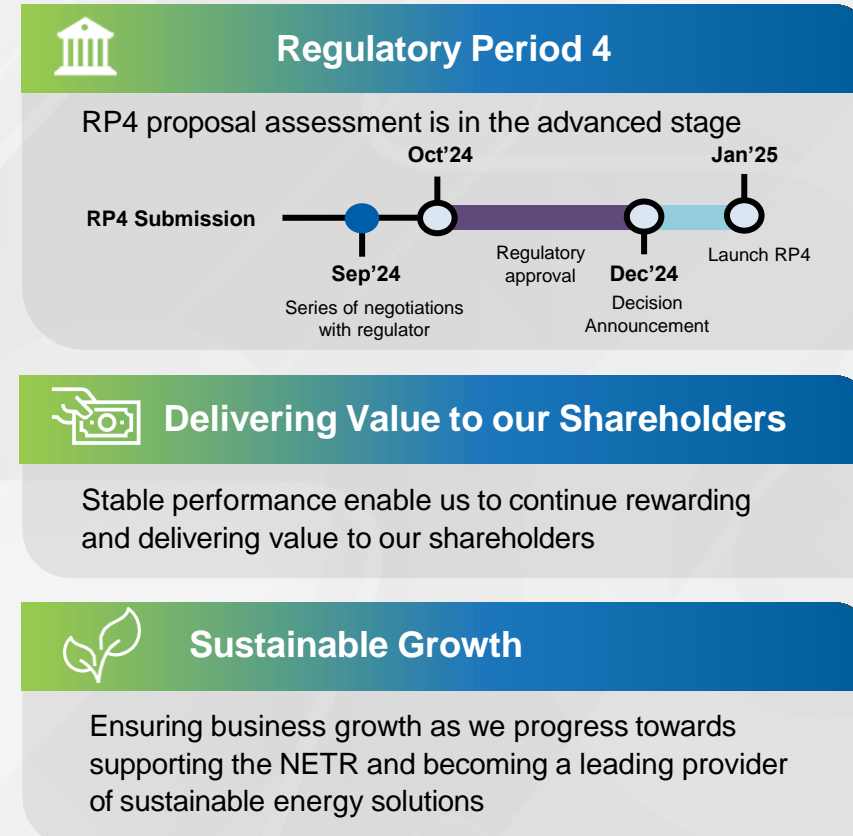
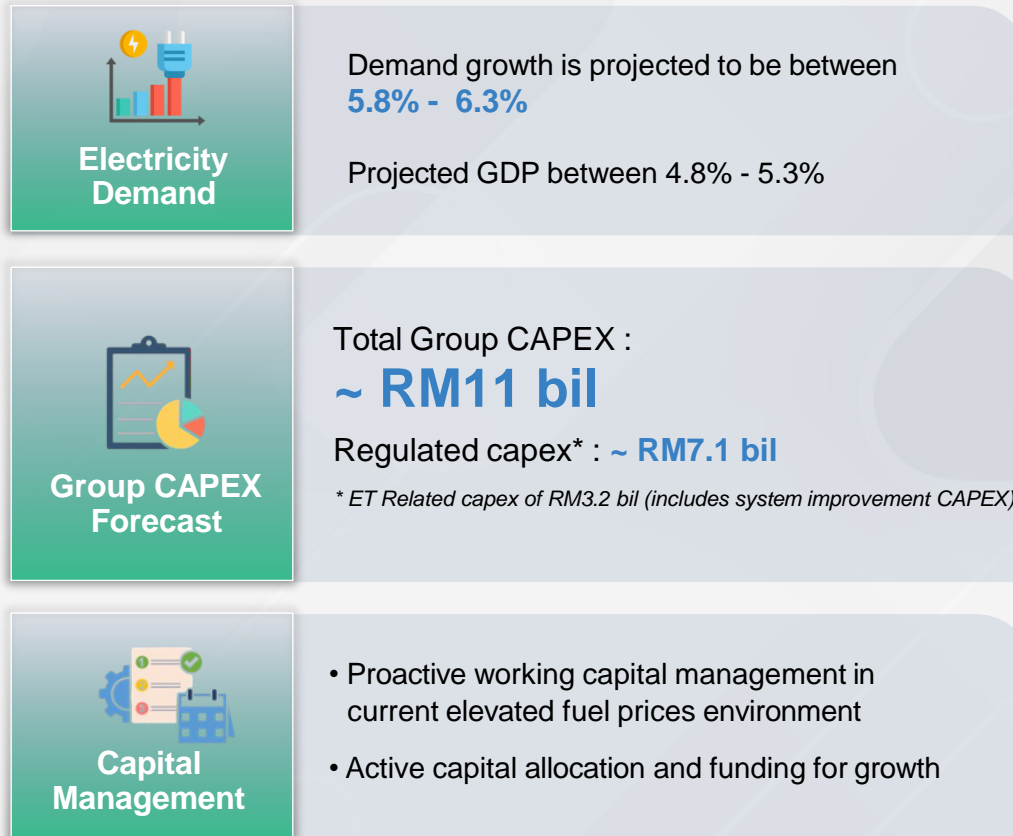
Transition Finance Framework

- Guidelines on **funding sustainable projects**
- TNB views sustainable finance as an enabler towards achieving its Net Zero Emission by 2050 aspiration



TNB'S TRANSITION FINANCE FRAMEWORK

We continue to pursue sustainable business growth as we commit to a greener future



Appendix

9MFY2024

- *Details on Financial Results*
- *Generation Business Performance*
- *International Business Performance*
- *Shareholdings*

Y-o-Y analysis

RM mil
Revenue
Imbalance Cost Pass Through (ICPT)*
Operating expenses (without depreciation)
Net reversal/(loss) on impairment of financial instruments
Other operating income
EBITDA
EBITDA Margin (%)*
Depreciation
EBIT
Foreign exchange:
- Transaction
- Translation
Share of results of joint ventures
Share of results of associates
Profit before finance cost
Fair value changes of financial instruments
Finance income
Finance cost
Profit from ordinary activities before taxation and zakat
Taxation and Zakat:
- Company and subsidiaries
- Deferred taxation
Profit for the period (PAT)
Attributable to:
- Owners of the Company
- Non-controlling interests

9MFY'24	9MFY'23	Variance	
		RM mil	%
42,358.8	39,414.9	2,943.9	7.5
7,371.6	8,491.6	(1,120.0)	(13.2)
(36,040.4)	(34,141.4)	(1,899.0)	5.6
17.8	(32.1)	49.9	>100.0
691.1	609.8	81.3	13.3
14,398.9	14,342.8	56.1	0.4
36.2%	37.5%	-	(1.3)
(8,520.5)	(8,368.4)	(152.1)	1.8
5,878.4	5,974.4	(96.0)	(1.6)
25.9	2.0	23.9	>100.0
1,046.0	(362.5)	1,408.5	>100.0
14.3	9.4	4.9	52.1
286.5	26.3	260.2	>100.0
7,251.1	5,649.6	1,601.5	28.3
(5.0)	14.5	(19.5)	>(100.0)
445.4	411.7	33.7	8.2
(3,019.4)	(3,376.1)	356.7	(10.6)
4,672.1	2,699.7	1,972.4	73.1
(846.6)	(631.6)	(215.0)	34.0
(3.7)	11.1	(14.8)	>(100.0)
3,821.8	2,079.2	1,742.6	83.8
3,744.1	2,186.4	1,557.7	71.2
77.7	(107.2)	184.9	>100.0
3,821.8	2,079.2	1,742.6	83.8

Y-o-Y analysis:

- Higher Group revenue recorded from sales demand growth of 7.6% and additional revenue mainly from TNBI operations.
- Reduction in ICPT due to decrease in coal price.
- Refer Operating Expenses slide.
- Forex translation gain due to strengthening of MYR.
- Higher mainly due to change in accounting and tax treatment under hyper-inflationary experienced by our associate in Turkey, of RM225.1 mil. This has a corresponding impairment of the same amount, hence neutral impact to earnings.
- Lower finance cost due to repayment of loans and interest capitalisation.

Q-o-Q analysis

RM mil	3QFY'24	2QFY'24	Variance	
			RM mil	%
Revenue	14,351.6	14,366.8	(15.2)	(0.1)
Imbalance Cost Pass Through (ICPT)	2,196.4	2,822.2	(625.8)	(22.2)
Operating expenses (without depreciation)	(12,295.8)	(12,442.2)	146.4	(1.2)
Net reversal on impairment of financial instruments	62.8	14.4	48.4	>100.0
Other operating income	179.4	338.3	(158.9)	(47.0)
EBITDA	4,494.4	5,099.5	(605.1)	(11.9)
Depreciation	(2,882.0)	(2,858.3)	(23.7)	0.8
EBIT	1,612.4	2,241.2	(628.8)	(28.1)
Foreign exchange:				
- Transaction	7.6	(7.1)	14.7	>100.0
- Translation	1,112.5	130.2	982.3	>100.0
Share of results of joint ventures	7.3	2.1	5.2	>100.0
Share of results of associates	28.1	243.7	(215.6)	(88.5)
Profit before finance cost	2,767.9	2,610.1	157.8	6.0
Fair value changes of financial instruments	(44.1)	11.5	(55.6)	>(100.0)
Finance income	130.1	159.1	(29.0)	(18.2)
Finance cost	(978.5)	(1,013.8)	35.3	(3.5)
Profit from ordinary activities before taxation and zakat	1,875.4	1,766.9	108.5	6.1
Taxation and Zakat:				
- Company and subsidiaries	(267.9)	(320.0)	52.1	(16.3)
- Deferred taxation	24.0	65.5	(41.5)	(63.4)
Profit for the period (PAT)	1,631.5	1,512.4	119.1	7.9
Attributable to:				
- Owners of the Company	1,584.3	1,444.1	140.2	9.7
- Non-controlling interests	47.2	68.3	(21.1)	(30.9)
	1,631.5	1,512.4	119.1	7.9

Q-o-Q analysis:

- 1 Lower ICPT due to lower coal price.
- 2 SPG one-of-claim of RM163.0 mil.
- 3 Higher forex translation gain due to strengthening of MYR.

Y-o-Y normalised EBITDA and PAT for 9MFY'24

EBITDA Components	9MFY'24 RM mil	9MFY'23 RM mil
Reported EBITDA	14,398.9	14,342.8
MFRS16 impact ¹	(2,891.0)	(3,174.7)
Normalised EBITDA	11,507.9	11,168.1

PAT Components	9MFY'24 RM mil	9MFY'23 RM mil
Reported PAT	3,821.8	2,079.2
Forex Translation	(1,046.0)	362.5
MFRS16 impact ¹	499.8	529.4
Normalised PAT	3,275.6	2,971.1

¹

MFRS16 impact:

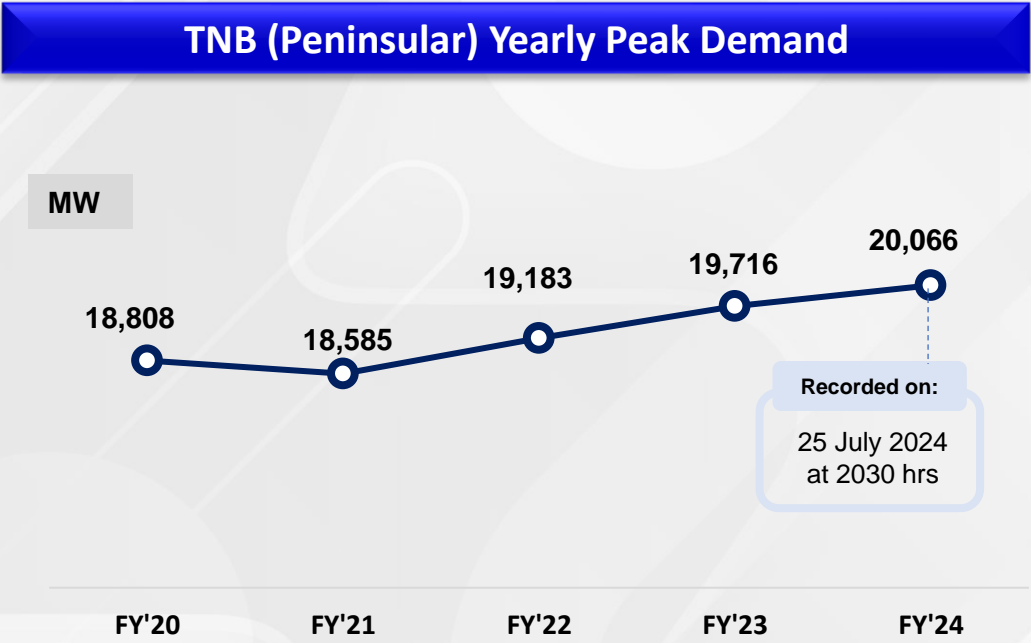
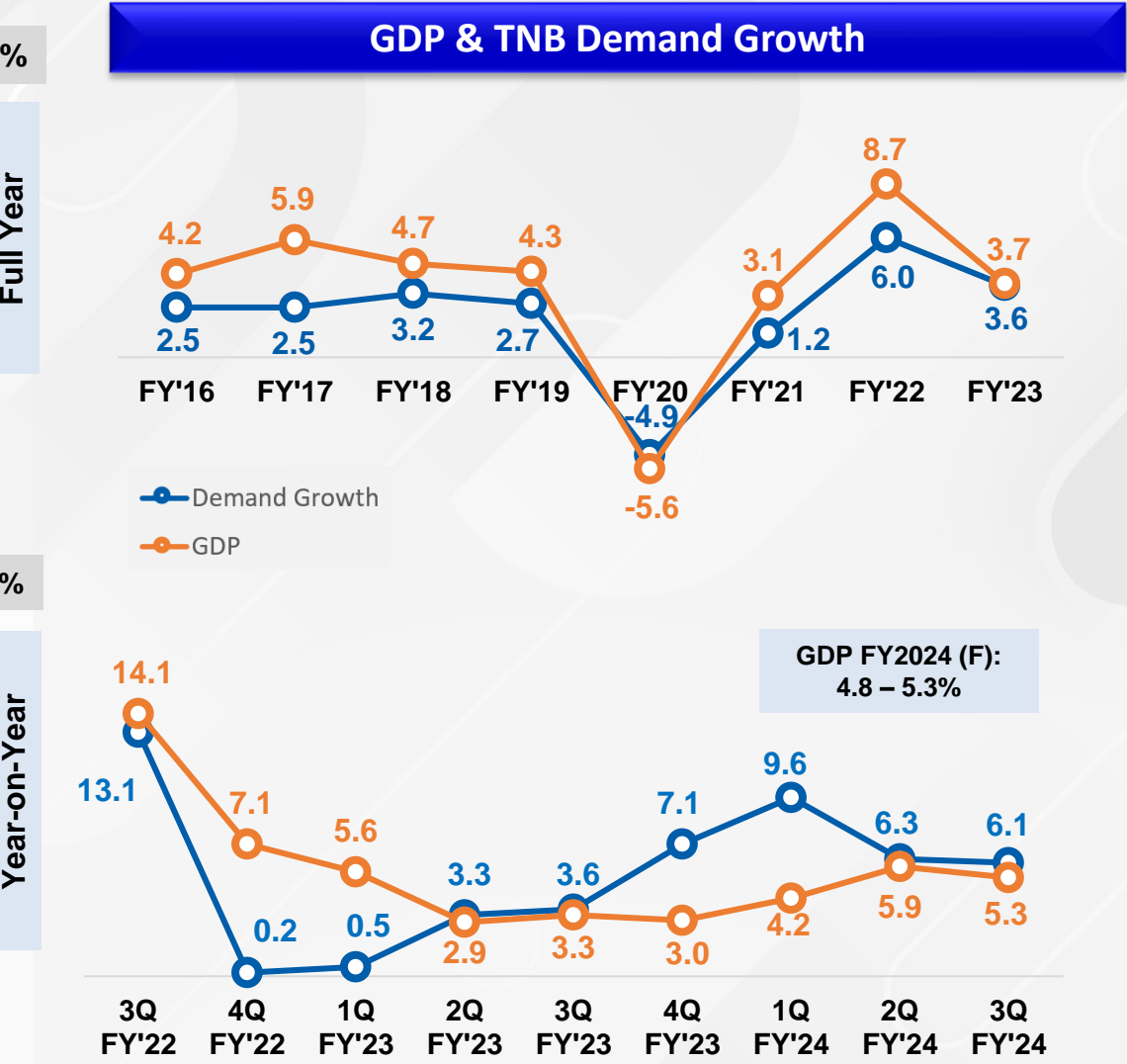
	9MFY'24 RM mil	9MFY'23 RM mil	Variance RM mil
Capacity Payment	2,891.0	3,174.7	(283.7)
Depreciation	(2,391.9)	(2,617.7)	225.8
Finance Cost	(1,142.8)	(1,236.5)	93.7
Deferred Tax	143.9	150.1	(6.2)
Net Impact	(499.8)	(529.4)	29.6

Higher Group revenue driven by overall healthy demand growth

	3QFY'24		2QFY'24		Variance (3QFY'24 vs 2QFY'24)		9MFY'24		9MFY'23		Variance (9MFY'24 vs 9MFY'23)	
UNITS SOLD	GWh		GWh		GWh	%	GWh		GWh		GWh	%
Sales of Electricity (GWh)												
- TNB	33,358.5		33,120.5		238.0	0.7	98,378.4		91,714.6		6,663.8	7.3
- SESB	1,697.0		1,707.6		(10.6)	(0.6)	4,984.7		4,543.2		441.5	9.7
- EGAT (Export)	0.3		0.2		0.1	50.0	0.9		0.4		0.5	>100.0
- TNBI*	274.6		307.6		(33.0)	(10.7)	811.1		522.7		288.4	55.2
Total Units Sold (GWh)	35,330.4		35,135.9		194.5	0.6	104,175.1		96,780.9		7,394.2	7.6
REVENUE	RM mil	sen/ kWh	RM mil	sen/ kWh	RM mil	%	RM mil	sen/ kWh	RM mil	sen/ kWh	RM mil	%
Sales of Electricity (RM)												
- TNB	13,438.2	40.37	13,587.1	40.65	(148.9)	(1.1)	39,673.5	40.45	36,708.4	40.21	2,965.1	8.1
- SESB	570.2	34.37	595.9	34.87	(25.7)	(4.3)	1,715.3	34.55	1,550.2	34.32	165.1	10.7
- Accrued Revenue	41.9	-	(122.5)	-	164.4	>100.0	124.4	-	182.9	-	(58.5)	(32.0)
- EGAT (Export)	0.2	66.67	0.1	50.00	0.1	100.0	0.6	66.67	0.3	75.00	0.3	100.0
- TNBI	230.7	84.01	273.0	88.75	(42.3)	(15.5)	706.1	87.05	590.7	113.01	115.4	19.5
Sales of Electricity	14,281.2	40.42	14,333.6	40.79	(52.4)	(0.4)	42,219.9	40.53	39,032.5	40.33	3,187.4	8.2
Other Regulatory Adjustment	(666.3)		(739.2)		72.9	9.9	(1,873.9)		(988.3)		(885.6)	(89.6)
Tariff Support Subsidy	79.0		79.3		(0.3)	(0.4)	232.3		210.7		21.6	10.3
Fuel Subsidy - SESB	103.8		79.6		24.2	30.4	256.6		211.5		45.1	21.3
Total Sales of Electricity	13,797.7		13,753.3		44.4	0.3	40,834.9		38,466.4		2,368.5	6.2
Goods & Services	447.9		513.9		(66.0)	(12.8)	1,211.5		621.8		589.7	94.8
Construction contracts	31.0		27.3		3.7	13.6	92.8		115.2		(22.4)	(19.4)
Customers' contribution	75.0		72.3		2.7	3.7	219.6		211.5		8.1	3.8
Total Revenue	14,351.6		14,366.8		(15.2)	(0.1)	42,358.8		39,414.9		2,943.9	7.5

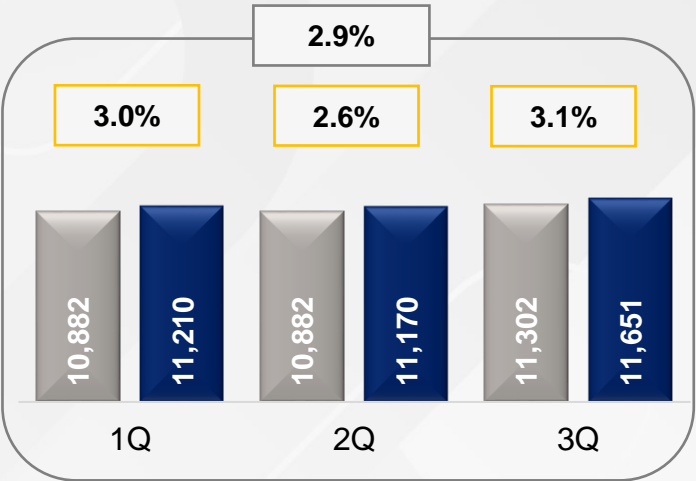
- 1 Higher revenue recorded from higher demand growth across all business units.
- 2 Refer Other Regulatory Adjustment slide.
- 3 Higher revenue recorded by subsidiaries.

Y-o-Y electricity demand grew in tandem with GDP



Increased demand across all sectors mainly contributed by commercial and domestic

Industrial



9MFY'24 main contributors for the increase in industrial & commercial sectors:

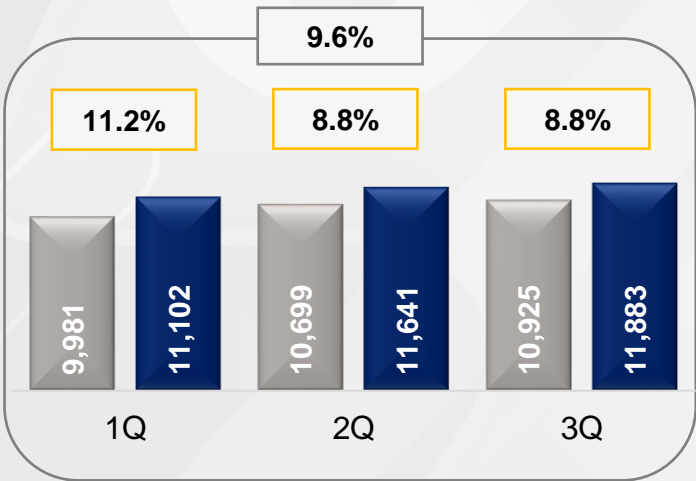
- Industrial**
- Utility electrical, consumer products and iron & steel
- Commercial**
- Retails, data centres and business services

Unit Sales (GWh) Growth

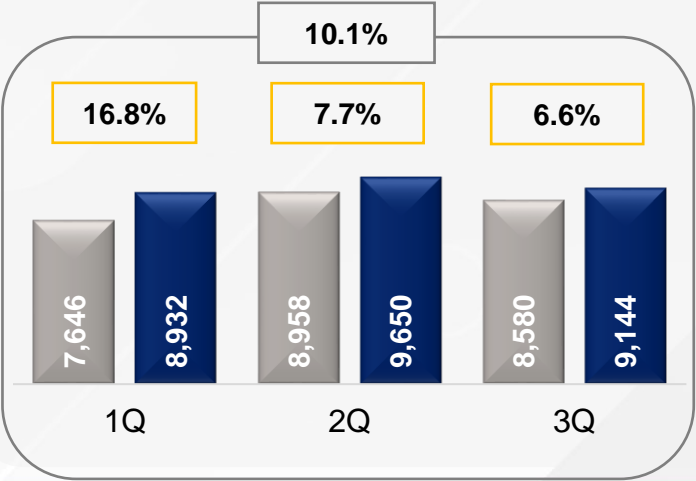
FY2023 Y-o-Y

FY2024 Q-o-Q

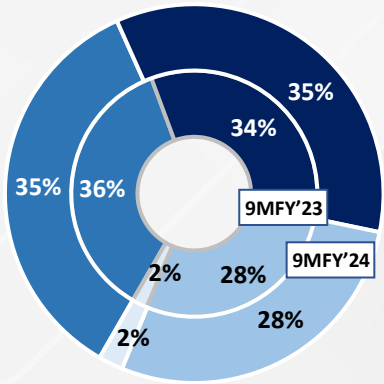
Commercial



Domestic



Sector Mix (%) 9MFY'24 vs 9MFY'23

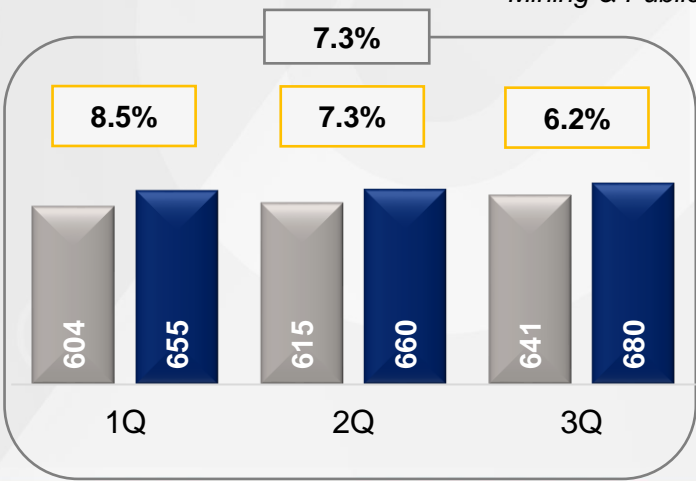


Industrial Commercial

Domestic Others

Others*

*includes Agriculture, Mining & Public Lighting



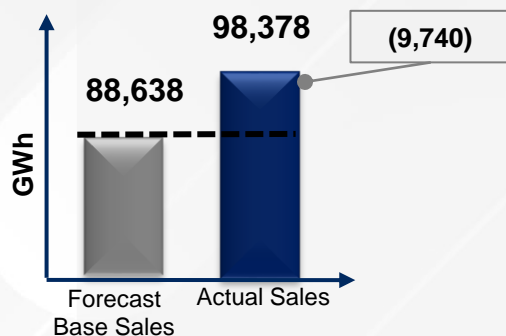
As at 9MFY'24, other regulatory adjustment of RM1,873.9 mil to be returned

Components of Other Regulatory Adjustment	1QFY'24 RM mil	2QFY'24 RM mil	3QFY'24 RM mil	9MFY'24 RM mil	9MFY'23 RM mil
Revenue Adjustment for Revenue Cap & Price Cap	(412.4)	(684.1)	(621.0)	1 (1,717.5)	(803.8)
Refund Related to Regulated Business	(66.7)	(52.2)	(85.4)	(204.3)	(202.6)
Recovery of 2021 ADD (Commercial and Industrial)	-	-	37.9	37.9	-
Regulatory Adjustment for SESB*	10.7	(2.9)	2.2	10.0	18.1
TOTAL	(468.4)	(739.2)	(666.3)	(1,873.9)	(988.3)

*SESB has implemented IBR framework starting 1 January 2022

Revenue Cap

9MFY'24 Variation in Sales (in GWh)



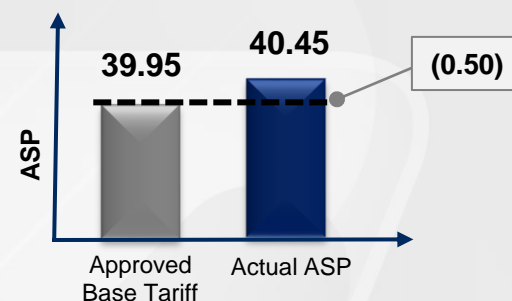
- The allowed annual revenue for revenue cap entities is based on 118.1TWh full year demand growth. Any excess/shortfall is adjusted through revenue adjustment mechanism.
- For 9MFY'24, higher actual sales has led to amount to be returned via revenue adjustment mechanism.

Business Entities	Allowed Tariff (sen/kWh)	Variation in Sales (GWh)	Adjustment RM mil
Revenue Cap Entities	12.60	(9,740)	(1,225.5)

Numbers manually computed will not match due to decimal variance

Price Cap

9MFY'24 Variation in ASP (sen/kWh)



- Any excess/shortfall of revenue earned due to higher/lower Average Selling Price (ASP) compared to Base Tariff is adjusted through revenue adjustment mechanism.
- For 9MFY'24, the ASP recorded was higher than the Base Tariff, thus the amount is to be returned via revenue adjustment mechanism.

Business Entities	Actual Sales (GWh)	Variation in ASP (sen/kWh)	Adjustment RM mil
Price Cap Entity	98,378	(0.50)	(492.0)

Higher Y-o-Y operating expenses

	3QFY'24	2QFY'24	Variance (3QFY'24 vs 2QFY'24)		9MFY'24	9MFY'23	Variance (9MFY'24 vs 9MFY'23)	
	RM mil	RM mil	RM mil	%	RM mil	RM mil	RM mil	%
Non-TNB IPPs Costs	4,612.0	4,694.8	(82.8)	(1.8)	13,540.2	11,506.3	2,033.9	17.7
Capacity Payment	(67.8)	36.7	(104.5)	>(100.0)	10.2	(60.5)	70.7	>100.0
Energy Payment	4,679.8	4,658.1	21.7	0.5	13,530.0	11,566.8	1,963.2	17.0
TNB Fuel Costs	4,273.6	4,552.9	(279.3)	(6.1)	13,161.4	14,900.0	(1,738.6)	(11.7)
Fuel Costs	4,561.4	4,514.5	46.9	1.0	13,427.3	15,497.7	(2,070.4)	(13.4)
Fuel Price Adjustment	(287.8)	38.4	(326.2)	>(100.0)	(265.9)	(597.7)	331.8	55.5
Total OPEX - Fuel and Power Purchase	8,885.6	9,247.7	1 (362.1)	(3.9)	26,701.6	26,406.3	2 295.3	1.1
Staff Costs	911.5	966.5	(55.0)	(5.7)	2,830.0	2,855.6	(25.6)	(0.9)
Repair & Maintenance	837.7	801.0	36.7	4.6	2,330.9	2,156.3	174.6	8.1
TNB General Expenses	518.7	434.2	84.5	19.5	1,382.0	1,214.4	167.6	13.8
Subs. General Expenses	1,142.3	992.8	3 149.5	15.1	2,795.9	1,508.8	3 1,287.1	85.3
Total OPEX - Non Fuel (without Depreciation)	3,410.2	3,194.5	215.7	6.8	9,338.8	7,735.1	1,603.7	20.7
Total Operating Expenses (without Depreciation)	12,295.8	12,442.2	(146.4)	(1.2)	36,040.4	34,141.4	1,899.0	5.6
Depreciation & Amortisation	2,882.0	2,858.3	23.7	0.8	8,520.5	8,368.4	152.1	1.8
Total Operating Expenses	15,177.8	15,300.5	(122.7)	(0.8)	44,560.9	42,509.8	2,051.1	4.8

1 3QFY'24 vs 2QFY'24: Lower fuel and power purchase costs due to lower coal and gas prices (refer Fuel Costs slide).

2 9MFY'24 vs 9MFY'23: Higher fuel and power purchase costs due to higher units generated.

3 Higher subsidiaries general expenses:
i. Higher cost of sales to support higher revenue recorded; and
ii. Impairment of associates (refer Y-o-Y Analysis Note 5).

Lower overall fuel costs due to lower coal price in 9MFY'24

Table A – TNB & IPP Fuel Costs for Peninsular

Fuel Type	9MFY'24	9MFY'23	Variance	
	RM mil	RM mil	RM mil	%
Coal	13,248.4	15,762.4	(2,514.0)	(15.9)
Gas	9,187.8	7,941.9	1,245.9	15.7
Distillate	126.7	214.3	(87.6)	(40.9)
Oil	25.9	29.9	(4.0)	(13.4)
Total	22,588.8	23,948.5	(1,359.7)	(5.7)

*Comprises TNB Fuel Costs & fuel payments to IPPs (part of Energy Payment), exclude solar.

Table B – TNB & IPP Units Generated for Peninsular

Fuel Type	9MFY'24		9MFY'23		Variance	
	GWh	Gen. Mix (%)	GWh	Gen. Mix (%)	GWh	%
Coal	59,811.7	56.1	57,371.1	57.6	2,440.6	4.3
Gas	39,930.0	37.4	36,006.4	36.1	3,923.6	10.9
Distillate	85.1	0.1	175.7	0.2	(90.6)	(51.6)
Hydro	4,592.1	4.3	4,493.8	4.5	98.3	2.2
Solar	2,276.8	2.1	1,618.8	1.6	658.0	40.6
Total	106,695.7	100.0	99,665.8	100.0	7,029.9	7.1

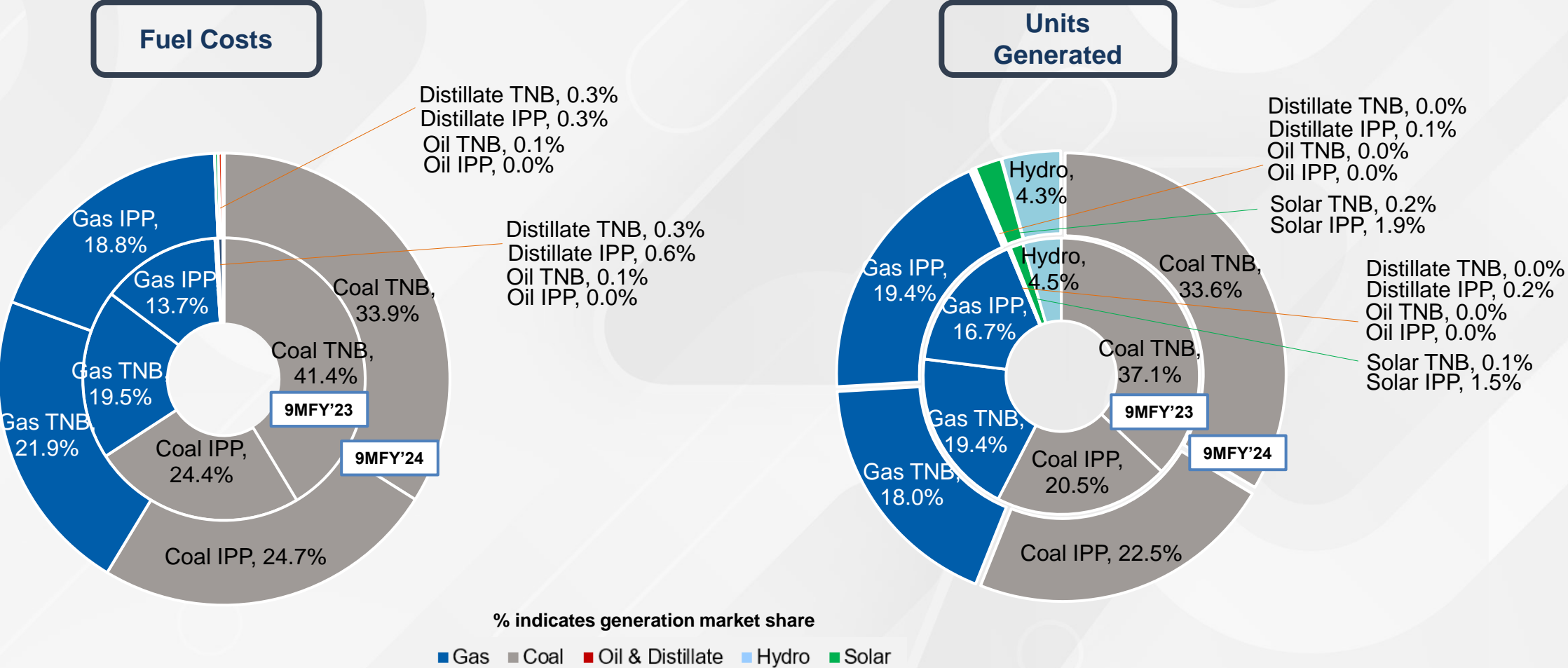
Table C – Fuel Costs Related Data

Fuel statistics	9MFY'24	9MFY'23
Average Coal Price Delivered (USD/MT)(CIF)	112.5	139.9
Average Coal Price Delivered (RM/MT)(CIF)	521.8	630.7
Coal Consumption (mil MT)	25.7	25.2
Gas Reference Market Price (RM/mmbtu)	1QFY'24	1QFY'23
	Tier 1 : 30.0	Tier 1 : 30.0
	Tier 2 : 44.7	Tier 2 : 62.1
	2QFY'24	2QFY'23
	Tier 1 : 35.0	Tier 1 : 30.0
	Tier 2 : 47.4	Tier 2 : 51.7
	3QFY'24	3QFY'23
	Tier 1 : 35.0	Tier 1 : 30.0
	Tier 2 : 45.7	Tier 2 : 44.9
Daily Average Piped Gas Volume (mmscfd)	982	859

Table D – Average Coal Price Delivered

	9MFY'24	9MFY'23	Variance	
	USD/MT	USD/MT	USD/MT	%
FOB	102.8	130.2	(27.4)	(21.0)
Freight	9.3	9.4	(0.1)	(1.1)
Others	0.4	0.3	0.1	33.3
CIF	112.5	139.9	(27.4)	(19.6)

Fuel Costs & Units Generated (TNB & IPPs – Peninsular) in 9MFY'24



% indicates generation market share

Gas Coal Oil & Distillate Hydro Solar

Lower Q-o-Q fuel costs mainly due to lower coal costs

Table A – TNB & IPP Fuel Costs for Peninsular

Fuel Type	3QFY'24	2QFY'24	1QFY'24	Variance 3QFY'24 vs 2QFY'24	
	RM mil	RM mil	RM mil	RM mil	%
Coal	4,441.3	4,605.6	4,201.5	(164.3)	(3.6)
Gas	2,939.3	3,013.5	3,235.0	(74.2)	(2.5)
Distillate	49.0	19.0	58.7	30.0	>100.0
Oil	2.0	10.5	13.4	(8.5)	(81.0)
Total	7,431.6	7,648.6	7,508.6	(217.0)	(2.8)

Note: Comprise TNB Fuel Costs & fuel payments to IPPs (part of Energy Payment), exclude solar.

Table C – Fuel Costs Related Data

Fuel statistics	3QFY'24	2QFY'24	1QFY'24
Average Coal Price Delivered (USD/MT)(CIF)	112.0	112.2	113.7
Average Coal Price Delivered (RM/MT)(CIF)	499.6	531.0	536.2
Coal Consumption (mil MT)	9.3	8.7	7.7
	3QFY'24	2QFY'24	1QFY'24
Gas Reference Market Price (RM/mmbtu)	Tier 1 : 35.0	Tier 1 : 35.0	Tier 1 : 30.0
	Tier 2 : 45.7	Tier 2 : 47.4	Tier 2 : 44.7
Daily Average Piped Gas Volume (mmscfd)	951	978	1017

Table B – TNB & IPP Units Generated for Peninsular

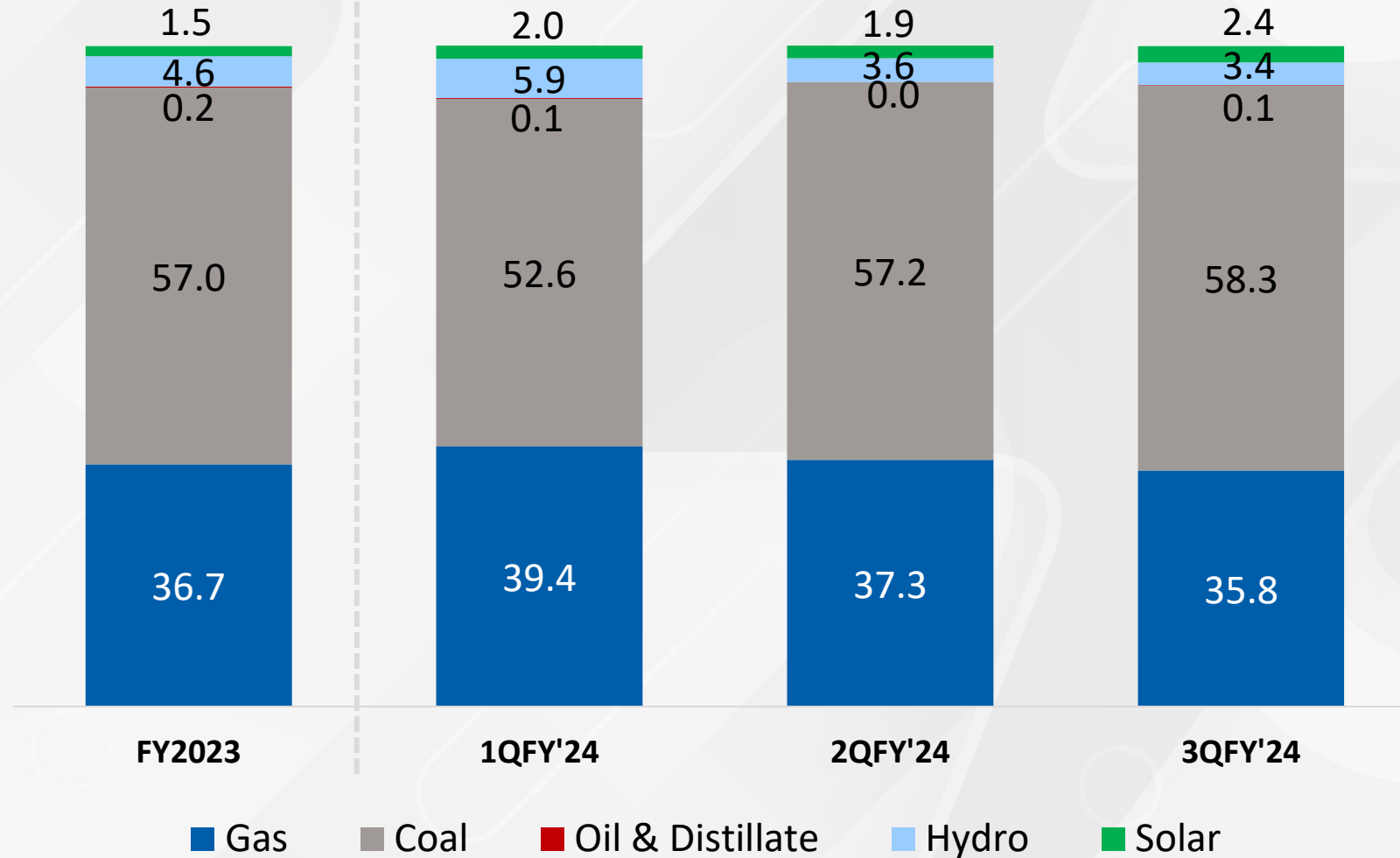
Fuel Type	3QFY'24		2QFY'24		1QFY'24		Variance 3QFY'24 vs 2QFY'24	
	GWh	Gen. Mix (%)	GWh	Gen. Mix (%)	GWh	Gen. Mix (%)	GWh	%
Coal	21,109.4	58.3	20,505.7	57.2	18,196.6	52.6	603.7	2.9
Gas	12,954.0	35.8	13,341.0	37.3	13,635.0	39.4	(387.0)	(2.9)
Distillate	39.4	0.1	-	0.0	45.7	0.1	39.4	>100.0
Hydro	1,246.1	3.4	1,289.6	3.6	2,056.4	5.9	(43.5)	(3.4)
Solar	886.2	2.4	692.2	1.9	698.4	2.0	194.0	28.0
Total	36,235.1	100.0	35,828.5	100.0	34,632.1	100.0	406.6	1.1

Table D – Average Coal Price Delivered

	3QFY'24	2QFY'24	1QFY'24	Variance 3QFY'24 vs 2QFY'24	
	USD/MT	USD/MT	USD/MT	USD/MT	%
FOB	102.2	102.0	104.5	0.2	0.2
Freight	9.4	9.7	8.7	(0.3)	(3.1)
Others	0.4	0.5	0.5	(0.1)	(20.0)
CIF	112.0	112.2	113.7	(0.2)	(0.2)

Q-o-Q: Higher generation from coal in 3QFY'24

Generation Mix for Industry (%)

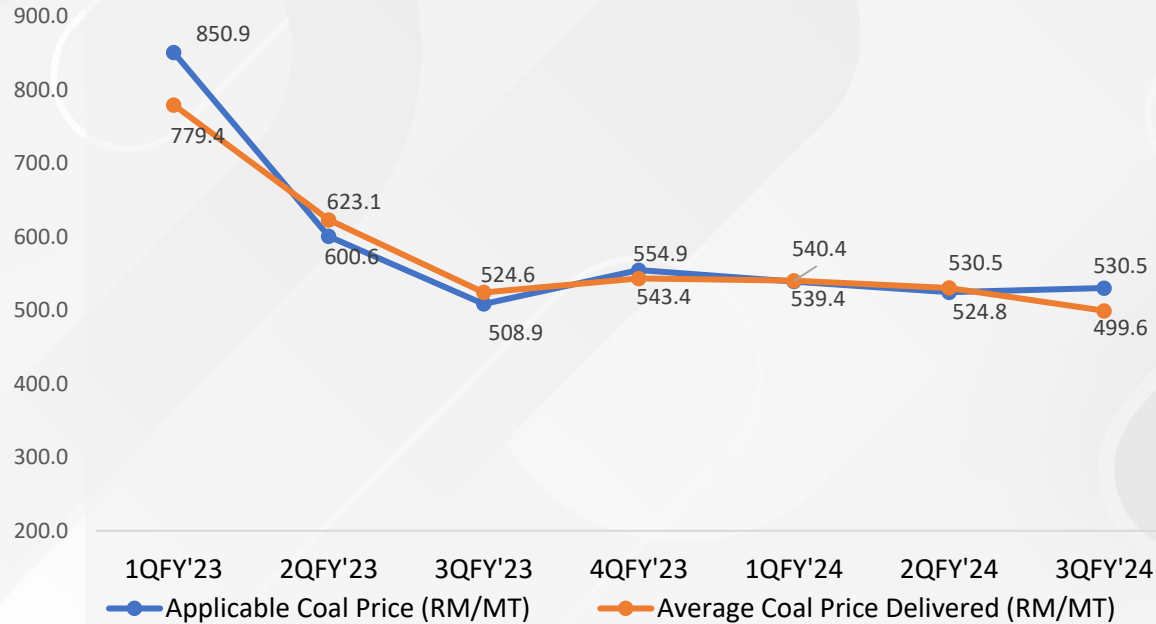


TNB is neutral to volatility in fuel costs under the ICPT framework

	4QFY'23	1QFY'24	2QFY'24	3QFY'24
	RM mil	RM mil	RM mil	RM mil
Single Buyer Actual Generation Costs: (A)	10,357.3	10,710.6	11,499.8	10,936.5
<i>Actual Sales (GWh)</i>	31,491.4	31,899.4	33,120.6	33,359.0
<i>Single Buyer Tariff (RM/kWh)</i>	0.2620	0.2620	0.2620	0.2620
Actual Gen Cost Recovered (B)	8,250.7	8,357.6	8,677.6	8,740.1
ICPT Surcharge / (Rebate) (C) (C = A – B)	2,106.6	2,353.0	2,822.2	2,196.4

Note: Numbers manually computed will not match due to decimal variance

Coal Price Trending



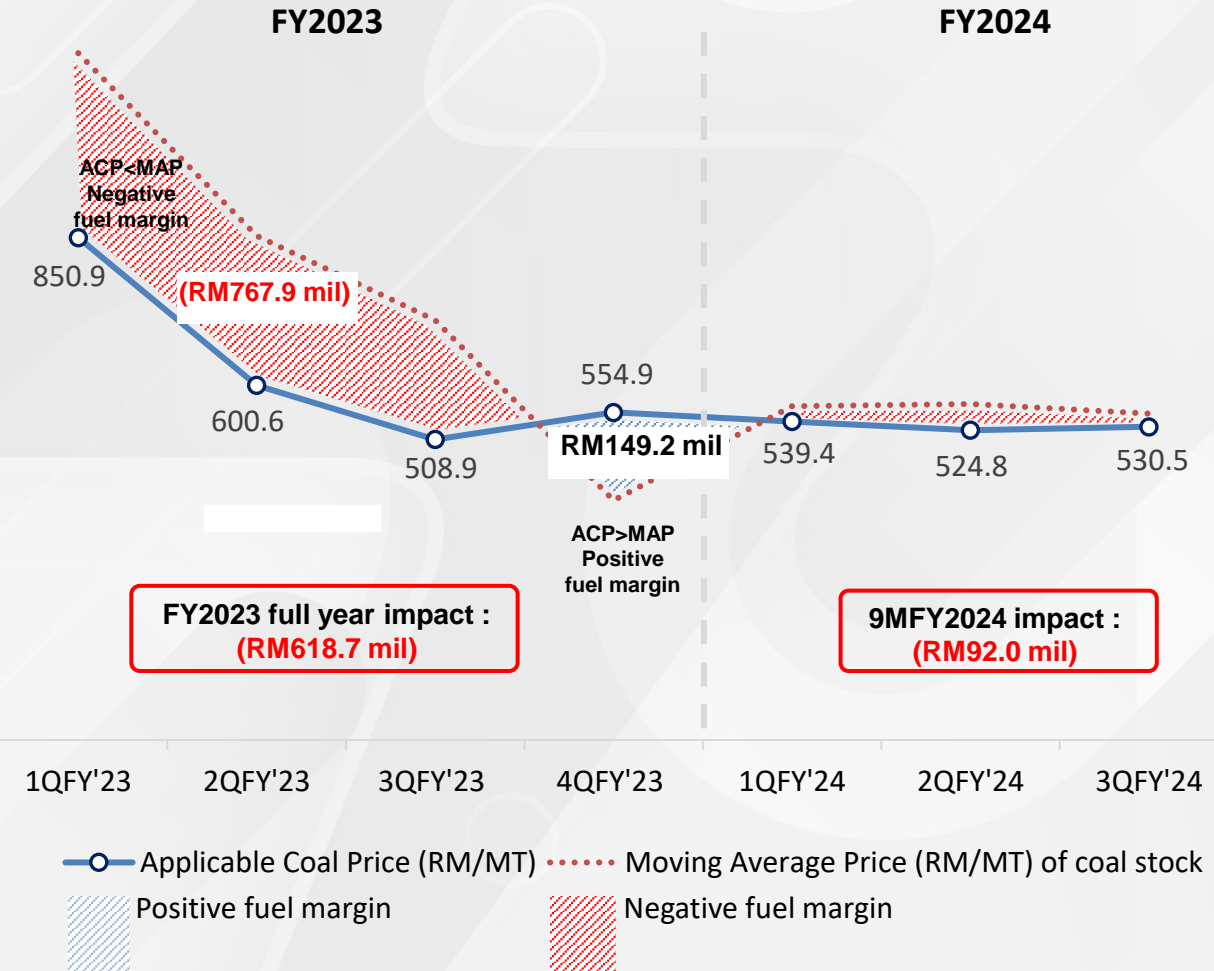
Coal Price & Applicable Coal Price (ACP) comparison

	1QFY'23	2QFY'23	3QFY'23	4QFY'23	1QFY'24	2QFY'24	3QFY'24
Average Coal Price Delivered (RM/mmbtu) *	35.85	29.43	24.31	24.36	24.81	24.23	22.88
ACP (RM/mmbtu)	38.77	27.52	23.32	25.42	24.73	24.13	24.31

* Based on internal conversion

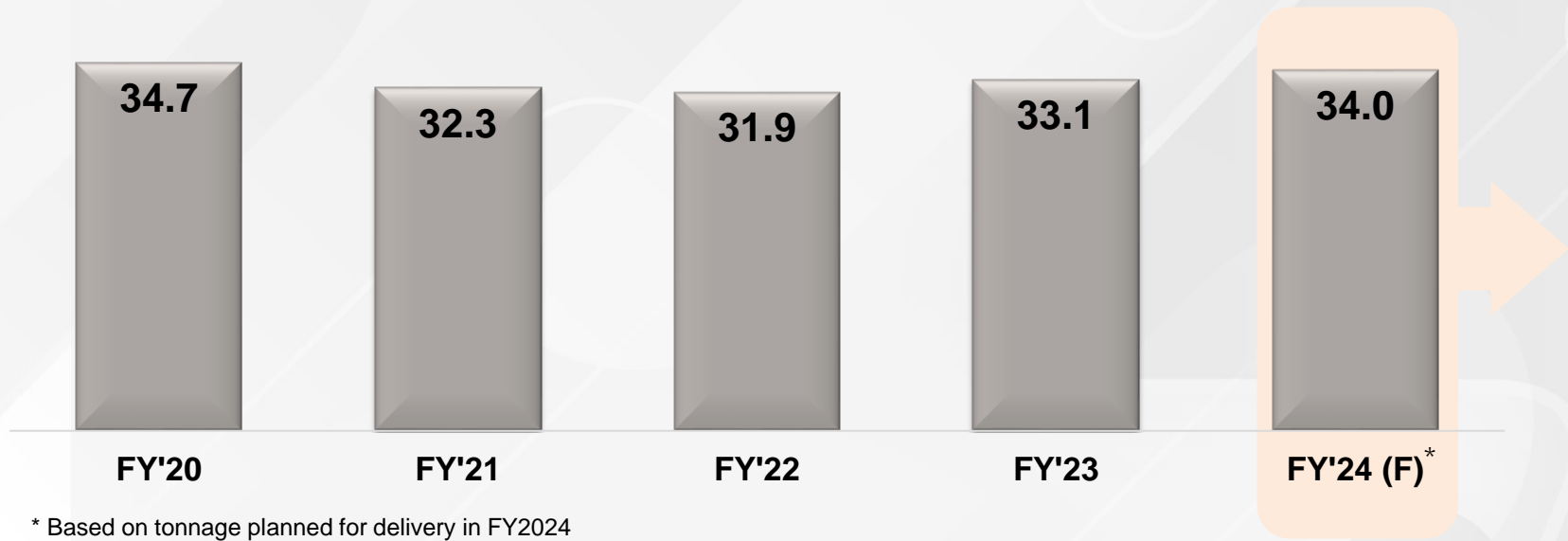
- Fuel Price Adjustment (FPA)** is the difference between the Applicable Coal Price (ACP) billed to generators and the actual coal price paid to supplier (delivered) by TNBF. The difference is caused by higher or lower coal price or due to currency exchange.
- ACP is set by Energy Commission on a monthly basis starting from August 2022.
- In 3QFY'24, the base ACP (RM24.31/mmbtu) used for billing the generators was higher than the coal price paid to supplier (RM22.88/mmbtu).

Fuel Margin: Applicable Coal Price (ACP) vs Moving Average Price (MAP)

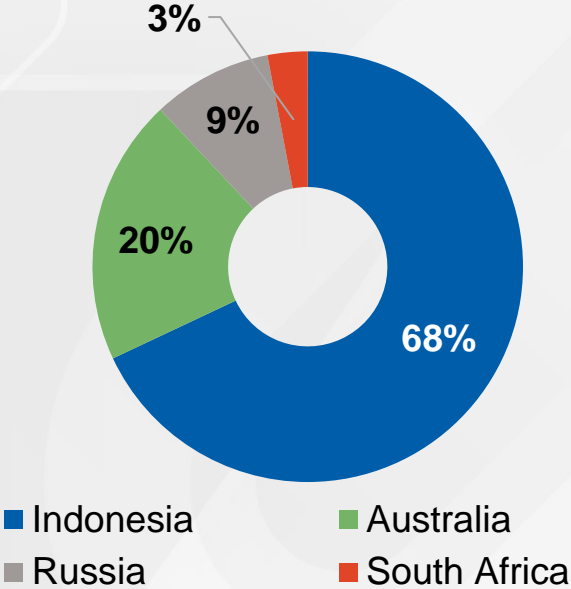


Industry coal requirement forecast for FY2024

Coal Consumption (mil MT)

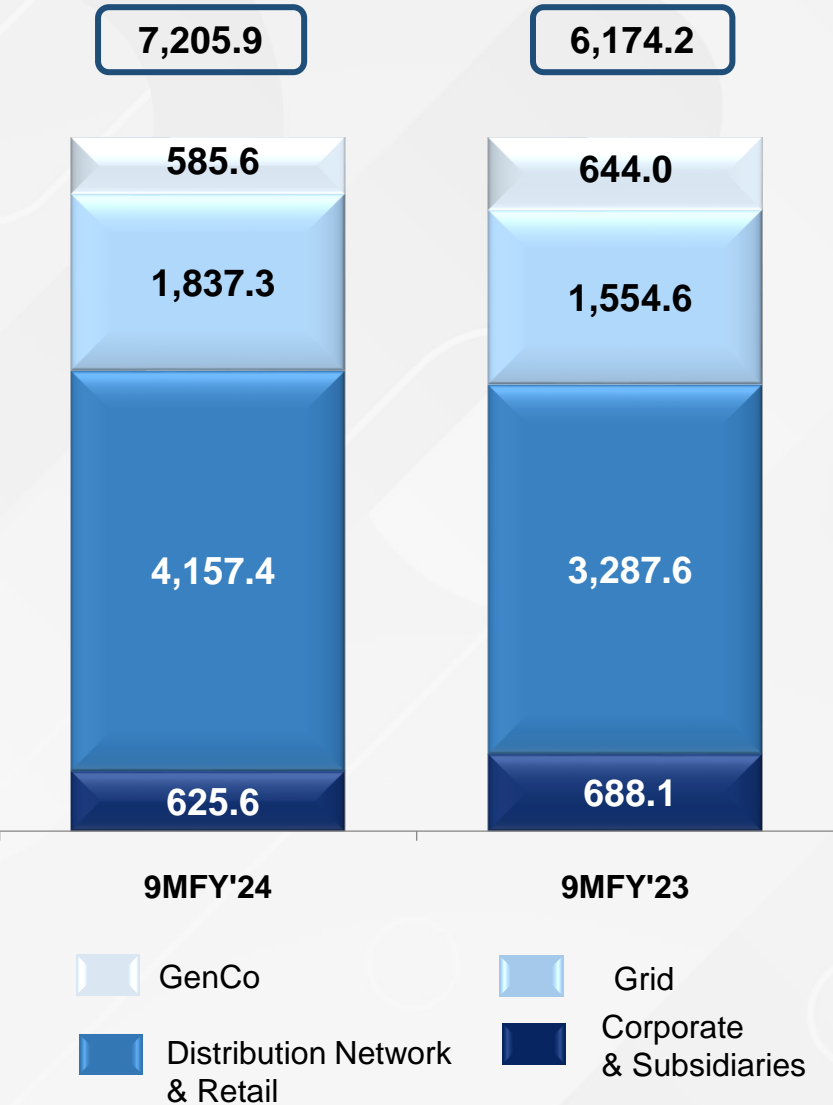


Source Country Mix



Group CAPEX

RM mil





Regulated CAPEX and Regulated Asset Base (RAB)

FY	RP3 REGULATED ENTITIES CAPEX		
	IBR Approved RM mil	Actual YTD RM mil	Utilisation (%)
2024	7,099.1	5,981.2	84.3

Total RAB (RM mil)	
Actual As at 30 Sep 2024	Approved FY2024 (Revised)
67,228.0	67,533.7
Regulatory net returns: RM3,452.1 mil	

Note: Numbers manually computed will not match due to decimal variance

Gearing improved to 47.5% as at 9MFY'24

	30 Sep'24	31 Dec'23
Total Debt (RM bil)	55.6 	61.8
Net Debt* (RM bil)	37.6	40.8
Gearing (%)	47.5 	50.3
Net Gearing (%)	32.1	33.2



4.85%

(FY'23: 4.75%)

Effective Average

Cost of Borrowing**



94:6

(FY'23: 95:5)

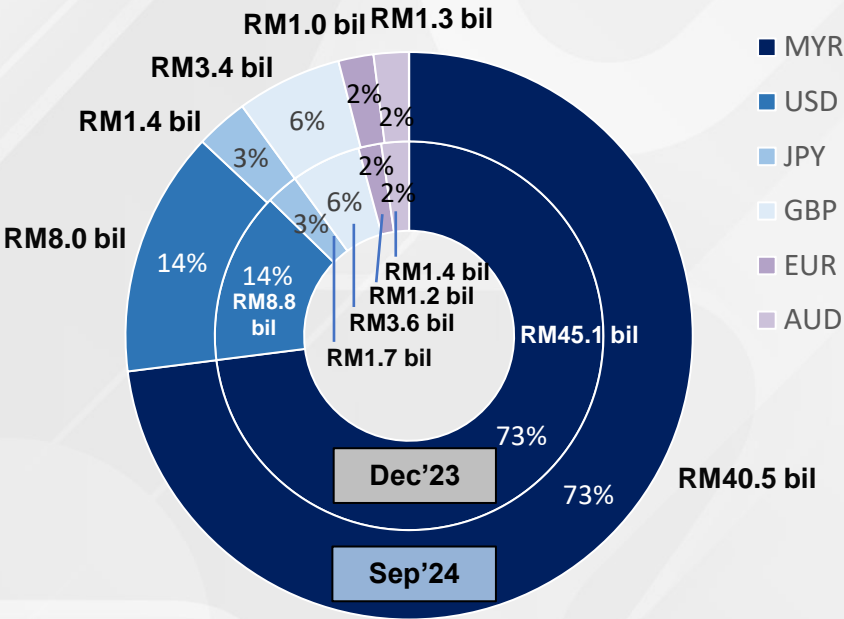
Fixed : Floating

Final Exposure

* Net Debt excludes deposits, bank and cash balances and investment in UTF
 ** Inclusive of interest rate swap

Note:
 Debt consists of Principal + Accrued Interest

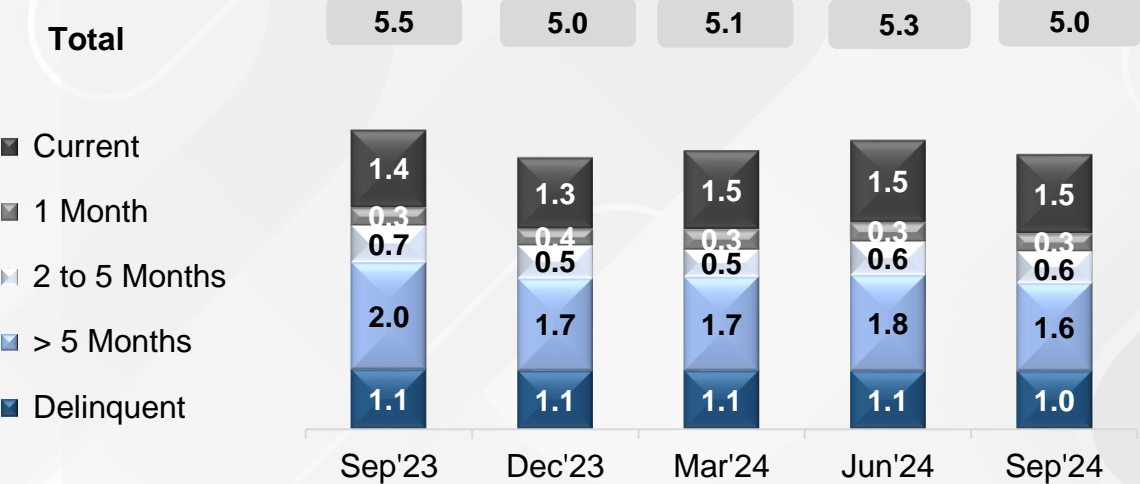
Major Loan Breakdown



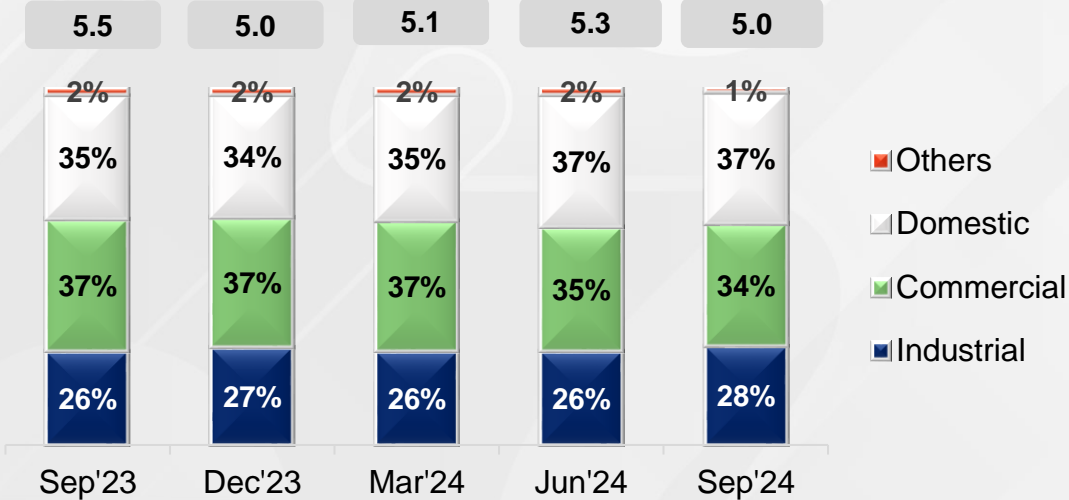
Closing FOREX	30 Sep'24	31 Dec'23
USD/RM	4.105	4.593
100YEN/RM	2.890	3.246
GBP/RM	5.498	5.854
AUD/RM	2.847	3.141
EUR/RM	4.584	5.083

Trade receivables as at 9MFY'24

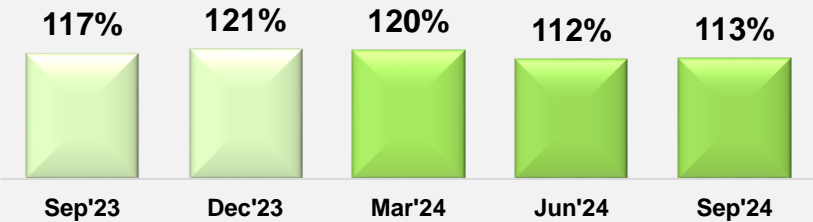
Trade Debtors Ageing (RM bil)



Trade Receivables By Sectors (RM bil)



Strong collection trend

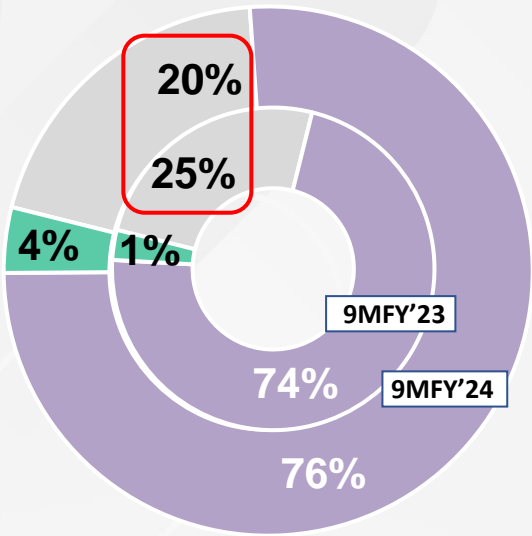


Cash flow

- We continuously monitor our cash flow position on a daily basis and remain prudent on our working capital management.
- **Moody's: Reaffirmed TNB corporate credit rating at A3 with a stable outlook (Nov'24).**

Revenue from coal recorded at 20% due to M4 outage

Actual Group Revenue*



RE Coal Others **

* Total revenue includes ICPT

** Others include revenue from regulated business, subsidiaries and other generation sources

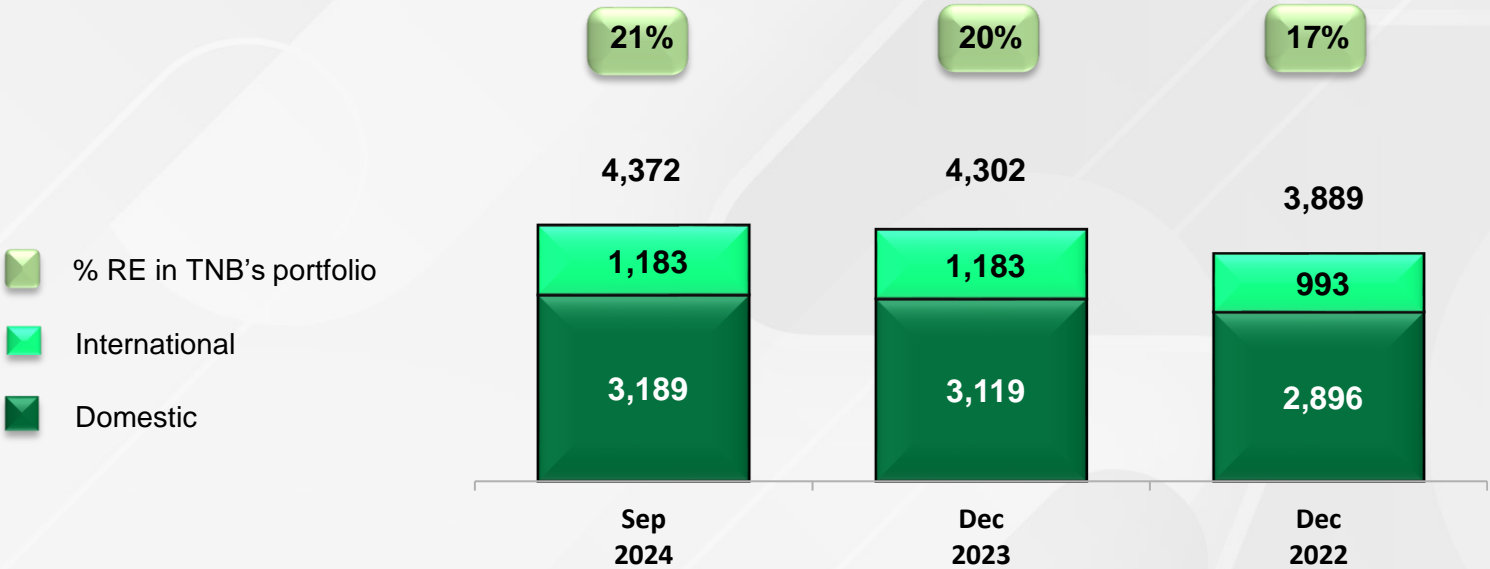


Long-term aspiration:
To be coal-free by 2050

- No new coal plant investment
- Reduction of coal capacity by 50% by 2035 and coal-free by 2050

Our RE journey is progressing well

TNB RE Portfolio
Renewable capacity (MW)



Note:

- Gross RE Capacity includes large hydro (exclude SESB)
- Solar capacity is quoted in MWp starting from 2023

TNB International Sdn Bhd (TNBI)


Vantage RE




Spark Renewables




Technology Focus:




Solar farms



Onshore wind



Offshore wind



Battery Energy Storage System (BESS)

TNBI is a TNB wholly owned subsidiary incorporated under the laws of Malaysia.

TNBI is a platform focused on capturing global renewable energy opportunities, diversifying TNB’s portfolio and spearheading TNB’s Energy Transition initiative, contributing towards supporting key milestones in TNB’s Net Zero 2050 journey.

TNBI is anchored by Vantage RE with ~1GW RE portfolio (operational and under construction) and Spark Renewables.

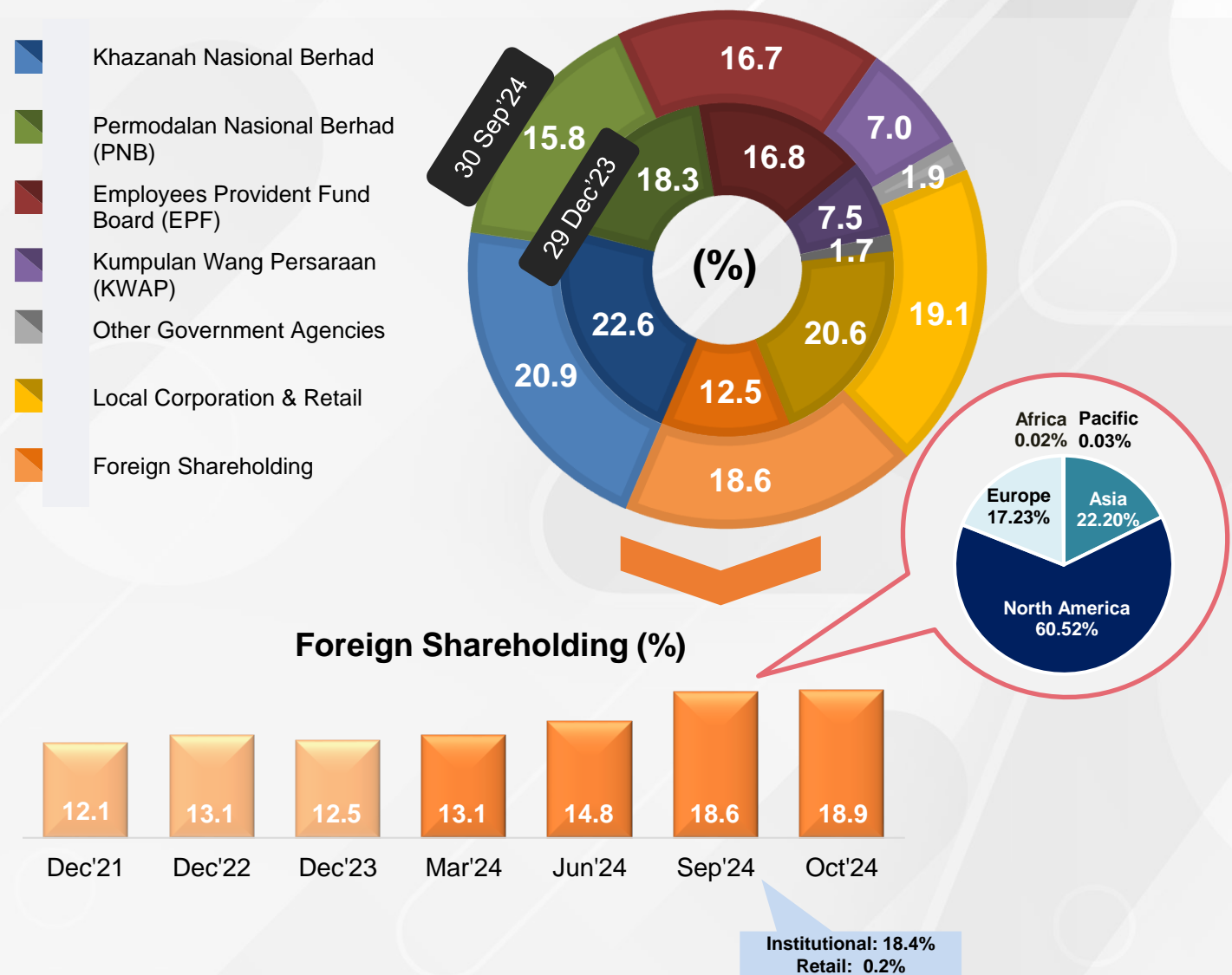
Financial Performance

Higher EBITDA Y-o-Y (9MFY’24: RM496.1 mil vs 9MFY’23: RM442.6 mil) due to additional contribution from newly acquired solar portfolio (276MW) in Ireland in December 2023 and higher generation from wind assets due to higher wind speeds.

Outlook

- TNB is committed to grow its presence in RE market and the current focus is on converting development pipelines into operational assets.
- In addition, TNB’s international RE platforms are implementing alternative revenue mechanisms, such as Contract-for-Difference (CfD) scheme, Corporate Power Purchase Agreements (PPAs) and exploring Battery Energy Storage System (BESS) based opportunities.
- This strategy will be supported by leveraging on TNB’s extensive experience in developing power projects in both international and domestic markets, along with knowledge and technology transfer within TNB Group.
- There is a steady progress in greenfield projects through implementing key strategies to drive timely completion and secure future growth opportunities.
- TNBI’s platform in Australia, Spark Renewables is currently advancing several development pipelines and has recently submitted a bid to secure grid access rights within the South-West Renewable Energy Zone.

Shareholdings



Disclaimer

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